

REMARKS

I. Introduction

By the present Amendment, claims 1-3, 5, 8, 9 and 13 have been amended. Claims 7, 11, 15, and 16 have been cancelled. Claims 19-27 are newly presented for consideration. Accordingly, claims 1-6, 8-10, 12-14, and 17-27 are now pending in the application. Claims 1, 13, and 23 are independent.

II. Office Action Summary

In the Office Action of November 28, 2005, claim 14 was objected to because of various informalities. Claims 1 and 3 were rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent 6,897,996 issued to Ikeda et al. ("Ikeda"). Claims 2 and 4-12 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ikeda in view of U.S. Patent Application 2002/0167480 published to Johnson, et al. ("Johnson"). Although not explicitly indicated, it appears that claims 13-18 have also been rejected under 35 U.S.C. §103(a) as being unpatentable over Ikeda in view of Johnson. These rejections are respectfully traversed.

III. Claim Objections

Claim 14 was objected to because of various informalities. Specifically, the Office Action indicates that there was insufficient antecedent basis for the limitations "bumps" and "windows" that were recited in the claim. By the present amendment, Applicants have amended independent claim 13 to provide antecedent basis for the terms in claim 14 that have raised the objections in the Office Action.

Applicants therefore respectfully submit that proper antecedent basis now exist for the terms in claim 14.

IV. Rejections Under 35 USC §102

Claims 1 and 3 were rejected under 35 U.S.C. §102(e) as being anticipated by Ikeda. Regarding this rejection, the Office Action indicates that Ikeda discloses an electrophoretic display that comprises first and second substrates each being disposed with a predetermined gap therebetween, as well as a layer comprising an insulating solvent and charged particles dispersed in the solvent. The Office Action also indicates that Ikeda discloses a first electrode disposed on one of the substrates, and a second electrode disposed on the second substrate, wherein the second electrode has a reflector with an uneven surface. Applicants respectfully disagree.

As amended, independent claim 1 defines an electrophoretic display that comprises:

a first and second substrates each being disposed with a predetermined gap therebetween; a layer comprising an insulating solvent and charged particles dispersed in the insulating solvent, the layer being sandwiched between the substrates; a first electrode disposed on the first substrate; and a second electrode disposed on the second substrate in such a manner that the first and second electrodes are opposite to each other, wherein the second electrode is provided with a reflector function with uneven surface comprising a plurality of bumps in each pixel.

According to the electrophoretic display of independent claim 1, the first and second substrates are disposed with a predetermined gap between them. The layer that contains an insulating solvent and charged particles dispersed in the insulating solvent is sandwiched between the two substrates. A first electrode is provided on the first substrate, and a second electrode is provided on the second substrate in such a manner that the first and second electrodes are opposite to each other. Additionally, the second electrode is provided with a reflector function which has an

uneven surface composed of a plurality of bumps in each pixel. According to the arrangement of independent claim 1, the plurality of bumps and/or concaves function to enhance the reflection and widen the viewing angle of the electrophoretic display.

The Office Action indicates that Ikeda discloses the features of the claimed invention, and cites various passages where these features are allegedly disclosed. Applicants' review of these passages, however, has failed to provide any disclosure for certain features recited in independent claim 1. For example, the Office Action indicates that Ikeda discloses a second electrode having a reflector within an uneven surface. Review of the reference suggests that Ikeda discloses an electrophoretic display device that is configured to move charged particles between a display electrode surface and a cell wall surface. However, Ikeda only discloses one protrusion that is formed on the first electrode of each pixel. Ikeda further indicates that the protrusion is preferably positioned around a site where the electric field will be the weakest in the first electrode. See column 4, lines 8-34 and Figs. 1-5A. Consequently, the viewing angle in Ikeda is defined by a single protrusion formed in the first electrode of one pixel. Ikeda does not appear to provide any additional disclosure, or even suggestion, that multiple protrusions can be provided on each pixel.

It is therefore respectfully submitted that independent claim 1 is allowable over the art of record.

Claims 3, 10, and 12 depend, either directly or indirectly, from independent claim 1, and are therefore believed allowable for at least the reasons set forth above with respect to independent claim 1. In addition, these claims each introduce novel elements that independently render them patentable over the art of record.



V. Rejections Under 35 USC §103

Claims 2 and 4-12 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ikeda in view of Johnson. As previously discussed with respect to independent claim 1, however, Ikeda fails to disclose certain features that are recited in independent claim 1. Additionally, these features are not suggested by Ikeda. Further, the inclusion of Johnson as a secondary reference does not remedy the failure of Ikeda to disclose or suggest features recited in independent claim 1.

Accordingly, claims 2 and 4-12 are further believed allowable over the art of record.

Claims 13-18 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ikeda in view of Johnson. Regarding this rejection, the Office Action indicates that Ikeda discloses an electrophoretic display device that contains most of the features recited in independent claim 13 as discussed with regards to independent claim 1. Applicants respectfully disagree.

As amended, independent claim 13 defines an electrophoretic display that comprises:

a first and second substrates arranged with a predetermined space; a layer sandwiched between the substrates and comprising an insulating solvent and charged particles dispersed in the solvent; a first electrode disposed on the first substrate; and a second electrode disposed on the second substrate in such a manner that the first and second electrodes are opposite to each other in a pixel, wherein the first electrode has an uneven surface comprising a plurality of bumps and concaves having a random pattern and has a network structure with a window in each pixel.

Similar to independent claim 1, the electrophoretic display of independent claim 13 includes a first electrode that has a plurality of bumps and concaves. As

previously discussed, Ikeda provides a display device wherein only a single protrusion is provided on each electrode per pixel.

It is therefore respectfully submitted that independent claim 13 is allowable over the art of record.

Claims 2, 4-6, 8, 9, 14, 17, 18, and 27 depend, either directly or indirectly, from independent claim 13, and are therefore believed allowable for at the reasons set forth above with respect to independent claim 13. In addition, these claims each introduce novel elements that independently render them patentable over the art of record.

Independent claim 23 is newly presented and define an electrophoretic display. Similar to independent claim 1, the first electrode contains a number of bumps and concaves thereon. As previously discussed, the applied references simply fail to provide any disclosure or suggestion for such a feature. It is therefore respectfully submitted that independent claim 23 is allowable over the art of record.

Claims 24-26 depend from independent claim 23, and are therefore believed allowable for at the reasons set forth above with respect to independent claim 23. In addition, these claims each introduce novel elements that independently render them patentable over the art of record.

VI. Conclusion


For the reasons stated above, it is respectfully submitted that all of the pending claims are now in condition for allowance. Therefore, a Notice of Allowance is believed in order, and courteously solicited.

If the Examiner believes that there are any matters which can be resolved by way of either a personal or telephone interview, the Examiner is invited to contact Applicants' undersigned attorney at the number indicated below.

AUTHORIZATION

Applicants request any shortage or excess in fees in connection with the filing of this paper, including extension of time fees, and for which no other form of payment is offered, be charged or credited to Deposit Account No. 01-2135 (Case: 520.42879X00).

Respectfully submitted,
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